kako

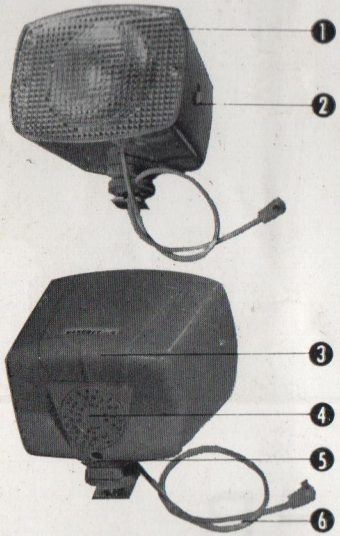
Type

B

INSTRUCTION BOOK

TRANSISTORIZED &
COMPACT

KAKONET-B

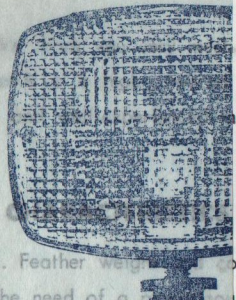


NAMES OF PARTS

1. Head
2. Change-over on/off Switch
3. Lid
4. Guide Number Dial
5. Neon Lamp
6. Synchro Cord

SPECIFICATION

Flash Duration	1/2000 sec.
Recycling Time	6–10 sec.
Color Temperature	6000 kv
Battery Life	40 flashes per one replacement
Guide Number	60 (ASA 100, f.)
Coverage Angle	55 degrees
Weight	400 gr.
Power Source	D. C. UM-3A 1.5v Penlight Battery × 4 pcs.



for your patronage.

transistorized electronic flash produced by Kako Products Inc., an manufacturer of electronic lighting devices.

OF KAKONET-B

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2. Economy : The power source can be taken from the dry cell, available any place and at low price. The transistor cir it guarantees economical their use.

KAKONET-B

se the flash duration of Kakonet-B is 1/2000 sec., you can get fast pictures. Kakonet-B simply and firmly fits any camera shoe and is designed for a truly practical use. Now you can take pleasing pictures more than ever with Kakonet-B.

We thank you very much for your patronage.

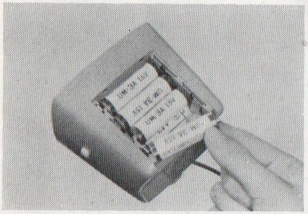
Kakonet-B is a high-powered transistorized electronic flash produced by Kako Products Inc., an expert and well-experienced manufacturer of electronic lighting devices.

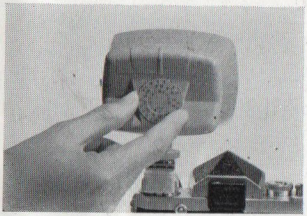
CHARACTERISTICS OF KAKONET-B

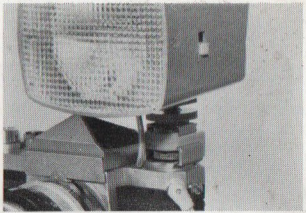
1. Feather weight and compact : Unlike electronic flash units up to now, Kakonet-B dispenses with the need of a power-source pack, instead of which, small penlight batteries can be put in the flash head itself. Moreover, the adoption of the transistor circuit made this unit smaller and lighter than are other similar lighting devices.

2. Economy : The power source can be taken from the dry cell, available any place and at low price. The transistor circuit guarantees economical their use.

3. Easy operation : Because the flash duration of Kakonet-B is 1/2000 sec., you can get fast pictures. Kakonet-B simply and firmly fits any camera shoe and is designed for a truly practical use. Now you can take pleasing pictures more than ever with Kakonet-B.







OPERATION

1. Open the top lid of the head and put in four pieces of penlight batteries in correct order. Then, fix the accessory shoe tightly into the accessory clip on your camera.

2. Turn the switch to on and you will hear a kind of metalic sound, the result of the transistor operating. Insert the other plug into the x-setting of your camera.

3. Now you see the neon lamp glow. What you have to do is to calculate your f-stop from the guide number dial. All arrangements for the flash shooting have finished. Any shutter speed will do only if your camera is of the between-the-lens shutter type. Although the neon lamp goes out every time after flashing, it lights again instantly when the capacitor is charged.

WORDS OF CAUTION

1. Don't forget to push the switch to off after use, or else the electricity in the batteries will drain out.

2. You will not get full light output if you press the shutter at the moment when the neon lamp lights. You had better wait a few seconds more in order to charge the capacitor completely.

3. As the dry cells become dead, it takes a longer time before the neon lamp illuminates. Then, enough time must be given for the full recharging of the capacitor. If it takes about ten seconds before the neon lamp illuminate, it is desirable to wait for another ten seconds.

TABLE OF FILM SPEEDS

Black-and-White :

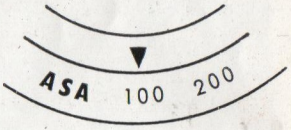
Agfa Isopan F	64 (ASA), 20 (DIN),
Adex KB 14	32 (ASA), 18 (DIN),
Gevaert Dia-Direct 26 pan	25 (ASA), 17 (DIN),
Kodak panatomic-X	40 (ASA), 19 (DIN),
Kodak Plus-X pan	160 (ASA), 22 (DIN),

Color :

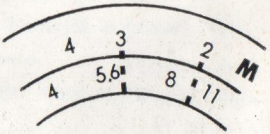
Agfa Color Negative	16 (ASA), 13 (DIN),
Super Anscochromo	100 (ASA), 21 (DIN),
Ektachrome E1	12 (ASA), 12 (DIN),
Ektachrome E2	32 (ASA), 32 (DIN),
High-Speed Ektachrome	160 (ASA), 22 (DIN),
Kodachrome	10 (ASA), 11 (DIN),
Kodachrome II	25 (ASA)

HOW TO DECIDE EXPOSURE

In the electronic flash photography, the F-stop is calculated from the guide numbers, which are dialed on the back of the head for reference. The shutter speeds have no relation to exposure.



1. In the first place, turn the dial in order that the black diamond mark on the dial may correspond with the ASA number of the film you are using. For example, if your film is of ASA 100 (DIN 21) turn the dial till the diamond mark correspond with the number 100 as illustrated.



2. On the upper part of the dial, you see the combination of correct F-stops and distances. The illustration drawn at right indicates that the F-stop of 6 feet is 9, that of 9 is 5. 6. Consequently, if the distance between your camera and the object is 6 feet, your F-stop is 9, if 9 feet, it is 5.6. In color filmphotography, the red diamond mark on the dial should be used.

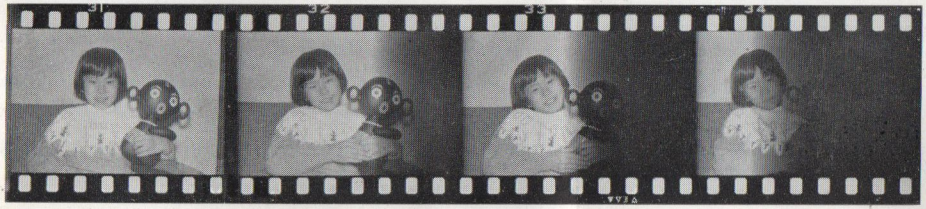
SHUTTER SPEED

Unlike the flash bulb, the electronic flash is so fast in its flash durotion that all of its light output synchronize completely only if the Synchro cord is connected to X-setting, regard less of any shutter speed. In other words, you can take the picture at 1/10 sec. or at 1/250 sec. with no change in the light outpot. In short, the flash shooting has nothing to do with the shutter speed except the case of focal plane shutter camera.

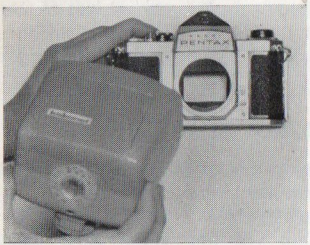
BETWEEN-THE-LENS SHUTTER AND FOCAL PLANE SHUTTER

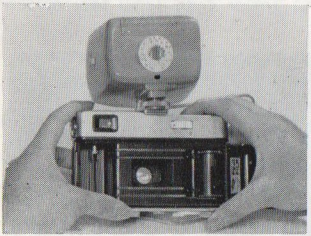
If your camera is equipped with a between-the-lens shutter, your electronic flash unit synchronizes at any shutter speed. But, if your camera is equipped with the focal plane shutter, you must use a shutter speed slower than 1/50 to allow for the synchronization.

Anyway, there are so many cameras of various characters that you had better refer again to the instruction booklet of your own camera. A shutter speed of faster than 1/50 sec. cuts off the object as shown below.



SYNCHRONIZATION TEST





No matter how brightly your unit falshes, the final pictures will be of no value, if it does not synchronize with the moment of the shutter openning. A simple way to test whether your flash synchronizes or not should be done, in a dark place if possible, as indicated at left.

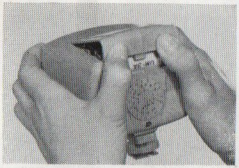
1. Focal Plane shutter

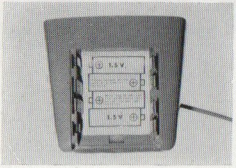
Take the lens from your camera. Insert a sheet of white paper where film is to be placed and make a flash on the paper from the front. If you can see from behind a rectangle of the full correct picture size, synchronization is correct. If part of the frame is eclipsed, synchronization is not correct.

2. Between-the-lens shutter

Open the back plate of your camera and set the diaphram to wide open. Point a flash toward the wall. If you can see the round shape from behind, synchronization is correct. If you see a shutter blade pattern, synchronization is not correct.

REPLACEMFNT OF BATTERY





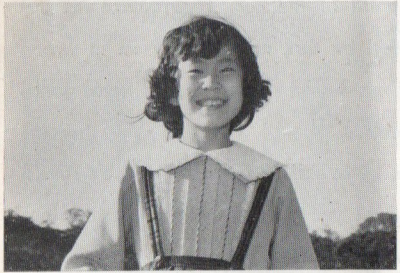
If it takes more than one minute before the neon lamp ligths or if no metalic sound of the trasistor can be heard, you have to replace all the dry cells with new ones because these are the signs that the dry cells are dead. Only one defective dry cell decreases the efficiency of all other fresh ones.

First, take off the top lid of the head and replace the old dry cells with new ones. But, be sure not to put them in wrong order. Even if the switch is turned to off, the batteries, once usea, will weaken in the course of time. Generally, they become completely dead in a month. It is then obvious that in order to avoid this kind of loss you should use up the replaced dry cells within a few days and wait unitl you plan to use your flash before putting in new batteries. If you should leave the switch "on". the batteries would not only weaken but also spoil the inside of the head by oozing corrosive liquid.

SYNCHRONIZATION IN DAYLIGHT

Even in day time you can make effective use ofy our Kakonet-B. When you can not take clear photographs in the evening or under cloudy weather, or when the object to be taken is shady in comparison with the lightness of sourroudings, by using Kakonet-B you can take clear and even pictures. It is the merit of the Kakonet-B that you can take one shot after another. In order to avoid harsh shadows under the strong sunlight in mid summer, please try Kakonet-B.

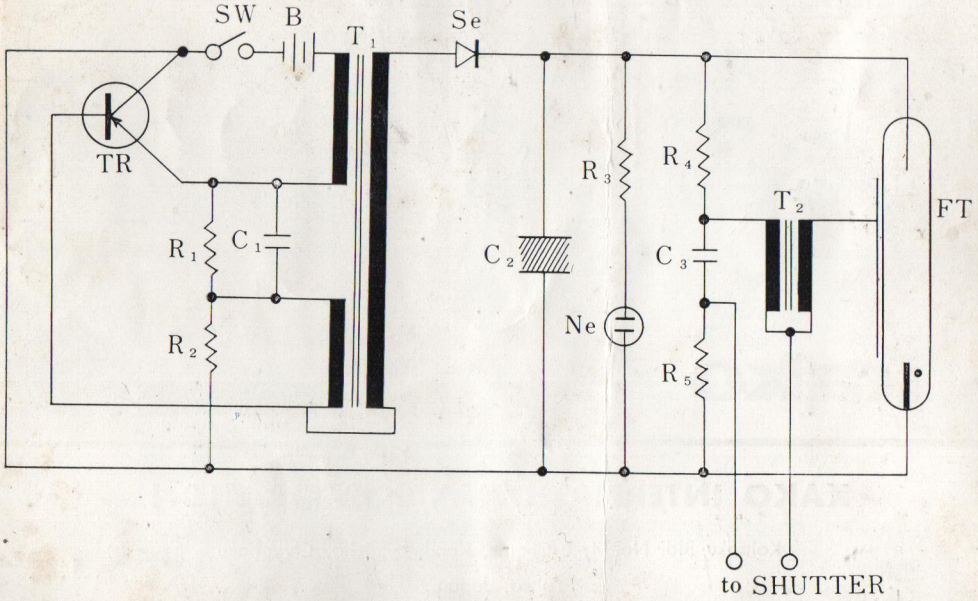
WITHOUT FLASH



WITH KAKONET-B

KAKONET B-TYPE PARTS LIST

1	SW	Main/sw	10	C3	Trigger Cap 400WV 0.02MFD
2	B	Pen Light Battery 1.5V × 4(Series)	11	R1	Resistor 1/4W 100OHM
3	TR	Transistor Nec. 2SB107	12	R2	Resistor 1/4W 300OHM
4	T1	Trans Former (Secondary 300V)	13	R3	Resistor 1/4W 1MeG OHM
5	T2	Trans For Direct Triggering	14	R4	Resistor 1/4W 4MeG OHM
6	Ne	Neon Lamp (Indicator) DC180V	15	R5	Resistor 1/4W 4MeG OHM
7	FT	Flash Tube 106 Type Min DC160V	16	Se	Rectifier KC21/8
8	C1	Condenser 10V 10MFD			
9	C2	Discharge Cap 300WV 620MFD			


SW
B
T1
Se
TR
R1
C1
R2
C2
R3
R4
T2
FT
C3
Ne
R5
to SHUTTER

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